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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,119	02/17/2004	Oliver Horn	033171-146	6508

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EXAMINER	
FORD, JOHN K	

ART UNIT	PAPER NUMBER
3744	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

8D

Office Action Summary	Application No.	Applicant(s)	
	10/780,119	HORN ET AL.	
	Examiner	Art Unit	
	John K. Ford	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on June 4, 2007.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1,2,7,8,15-30 is/are pending in the application.

4a) Of the above claim(s) 17,23,27 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,7,8,15,16,18-22,24-26and28-30 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Applicant's election of the battery driven compressor, controllable expansion valve, and heat exchanger in the driver's compartment, without traverse, is acknowledged. Applicant has identified claims 1, 2, 7, 8, 15, 16, 18-22, 24-26 and 28-30 as readable on the elected species. In the absence of a traverse, the election requirement is deemed proper and made final.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15, 16, 18-22, 24-26 and 28-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

These claims clearly contain "new matter" not supported by the original disclosure. In paragraph 13 of the original specification it simply states that the electrical energy from the generator is configured in a way that "makes available the electrical energy [of the generator]" to the electrically driven compressor. It does not say that it does this selectively in lieu of using the battery as claim 15 is currently claiming. Moreover the only mention of a battery in the entire disclosure is in paragraph

22, lines 14-16 and there is no disclosure there that the battery is selectively used in lieu of the generator as claim 15 is currently claiming. The original specification is silent as to which operating mode of the vehicle the battery is used to power the electrically driven compressor. In fact, in paragraph 28 of the original specification it states that during the stationary mode of the vehicle the compressor is not driven at all, "and is at most driven with a low electrical power". The original disclosure is silent as to this low electrical power source. One could speculate this could be a battery (as counsel does in amending claim 15) or idling the engine or connecting the system to some source of "shore power", typically the way recreational vehicle air conditioners are plugged into the campsite electrical system during stopovers. Speculation is not disclosure. To have original support, the new claims must be supported by "the necessary and only reasonable construction to be given to the disclosure", see Wagoner v. Barger 175 USPQ 85 (CCPA 1972).

Likewise claim 16, echoing what is claimed in claim 15, claims that the electric pump is selectively driven by the generator when the motor vehicle is in an operation mode and selectively by the battery when the motor vehicle is in an operating mode. This has even less support in the original specification than the "new matter" added to claim 15. All that is stated with regard to the pump is found in paragraph 27, which states: "The pump 34 is preferably electrically driven and can draw, for example, the electrical energy necessary for it from a battery (not illustrated)." Nothing is disclosed regarding the selective application of electricity from the generator and this battery as a

function of vehicle mode. In fact it would appear to be more likely that it is always connected to the battery based on the words of the original disclosure. The original disclosure does not provide support for the new limitation in claim 16 that the battery selectively supplies electricity to the compressor during the first operational mode (i.e. when the generator is selectively supplying electricity to the compressor motor). Claim 16, when viewed with the limitation of claim 15, suggests that the engine and the battery both selectively supply electricity to the compressor at the same time. This seems impossible as the examiner's understanding of the word "selective" brings to mind exclusive operation of either the generator or the battery, not the two being operated at the same time. Claim 16, also conflicts with applicant's own summary of the invention set forth in the first full paragraph on page 8 of the amendment filed with the RCE of February 26, 2007.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 7, 8, 15, 16, 18, 19, 20, 21, 26, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khelifa (USP 6,260,376) in view of Kang et al (WO 01/40005).

The detailed description of Figures 2 and 3 of Khelifa appears to show all of the claimed subject matter and the reference is incorporated here by reference by way of explanation. Given that it shares an inventor with the inventive entity of the current application, no further explanation by this examiner is deemed necessary. Applicant should also note col. 3, lines 28-43, incorporate here by reference.

Regarding functional recitations of intended modes of operation in an apparatus claim, it is submitted that these are not given weight in giving the claim its broadest reasonable interpretation. See MPEP 2114, incorporated here by reference. An apparatus is defined by what the apparatus is, not what apparatus does.

More specifically, Khelifa discloses an electrically driven compressor 19 (see column 3, lines 32-34). , a condenser 11, expansion valve 12, latent cold holdover 2, an air cooling mechanism comprising a secondary circuit 20. A battery (not shown) is used (no doubt) to power the pump 29 to circulate fluid in the secondary circuit 20, when the vehicle is in a stationary mode as explicitly disclosed in column 3, lines 34-38. There is no disclosure that this battery is used to drive the electrically driven compressor 19 during the driving mode. Instead, as disclosed in column 3, lines 38-44, the compressor 19 can be driven by mechanically coupling it to the engine such that when the engine is running (deemed a "driving mode" for purposes of rejection here) the compressor 19 is selectively driven by the engine and when the engine is switched off, the compressor 19 is driven by the battery. Likewise, as disclosed in column 3, lines 38-44, the pump 29

can be driven electrically from the battery either in the "driving mode" or when the engine is switched off.

Kang et al teaches the problem that mechanically coupling a compressor (such as compressor 19 of Khelifa) to an engine is disadvantageous because heat and vibration adversely affect the compressor decreasing its operating life (see Background, pages 1-2 of Kang, in particular). Kang explicitly teaches mechanically coupling a generator 17 to the engine that electrically drives an electrically driven compressor 10 (equivalent to electrically driven compressor 19 of Khelifa) in lieu of the aforementioned direct mechanical connection between the engine and compressor. To have mechanically coupled the internal combustion engine of Khelifa (disclosed in column 3, line 41 of Khelifa) with a generator (such as 17 of Kang) as taught by Kang at page 8, line 15-17 would have been obvious to one of ordinary skill in the art to avoid the disadvantage discussed above (namely deterioration of the compressor from heat and vibration). Furthermore, to have used the remainder of Kang's disclosed electrical connections and control means between the generator and the electrically driven compressor as discussed in the previous sentence to control the compressor to advantageously permit proper and energy efficient operation would have been obvious to one of ordinary skill in the art.

Regarding claims 2 and 8, see the secondary circuit 20 of Khelifa. Regarding claim 7, see Kang at page 8, line 15-17. Regarding the method of operating limitations

found principally in claims 1, 15, 16 19, 20 and 21, method-of-use limitations are not extended patentable weight in claims drawn to apparatus. See MPEP 2114, "Manner of Operating Device Does Not Differentiate Apparatus Claim From The Prior Art," incorporated here by reference. Notwithstanding MPEP 2114, collectively, Khelifa and Kang teach all of applicant's claimed modes of operation, to the extent that they were disclosed in the originally filed application.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 15 above, and further in view of Bay et al (USP 6,525,505).

Bay teaches a controllable expansion valve at 8 (col. 3, line 6). To have used the controllable expansion valve 8 of Bay in place of expansion unit 12 of Khelifa would have been obvious to one of ordinary skill in the art to improve starting performance of the compressor would have been obvious to one of ordinary skill in the art.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 15 above, and further in view of Burk et al (USP 5,560,214) or Herta (US2002/0100290).

Burk teaches a collector 19 and a dryer 23 formed into a condenser. Similarly, Herta teaches a collector/drier 36 downstream of condenser 22. To have formed the condenser 11 of Khelifa with a collector and dryer (conventional components in the

refrigeration art) to ensure proper operation of the system and to avoid corrosion problems would have been obvious to one of ordinary skill in the art.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 15 above, and further in view of Herta (US2002/0100290).

Herta discloses a condenser blower (23 and/or 24) for moving air through condenser 22. To have used such a conventional condenser blower to blow air through the condenser 11 of Khelifa would have been obvious to one of ordinary skill in the art to advantageously cool the condenser and thereby improve system performance.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 15 above, and further in view of Saperstein et al (USP 5,265,437).

To have placed the heat exchanger 21 in the driver's compartment if it was desired to cool the driver would have been obvious from Saperstein et al which is deemed to fairly teach placement of the heat exchanger in either or both of the driver's compartment and the sleeper compartment. Such placement in the driver's compartment would advantageously increase driver comfort.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Ford whose telephone number is 571-272-4911. The examiner can normally be reached on Mon.-Fri. 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John K. Ford
Primary Examiner